

Serial No. 10/676,052
Reply to Office Action of April 1, 2009

Docket No. SI-0042

REMARKS

Claims 1 and 4-23 are pending.

At the outset, Applicants would like to thank the Examiner for extending Applicants' representatives an interview to discuss the rejections in the Office Action. During the interview, differences between various embodiments disclosed in the specification and the cited references were discussed. More particularly, it was pointed out that related-art systems such as discussed in the Background section of the specification are inefficient because of the one-to-one correspondence that exists between the links and storage queues.

Because of this one-to-one correspondence, related-art systems will assign a queue to a link even when the link is not in use. Also, when the number of links is to be changed, a corresponding change must be performed for the queues. Also, because only one link is assigned to each queue, adjustments cannot be made to improve traffic flow when the load on the link increases to excessive levels.

During the interview, claims amendments were proposed to emphasize improvements over the related-art systems. These amendments have been formally incorporated within this paper.

Claim 1 has been amended to recite that "the queue assignment unit assigns a plurality of storage banks to at least one of the links and reallocates assignments of the storage banks to the links based on a change in load of one or more of the links, and wherein none of the storage banks is assigned to a link if the link is determined not to be in use, so as to ensure that the storage banks in the queue are assigned to links that are in use." (See, for example, Paragraphs

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[54], [69], [108], and [109] and Figure 6 for support). These features are not taught or suggested by the cited references, whether taken alone or in combination.

The Colmant patent discloses a manager 10 for controlling the transfer of data into and out of a queue 20. The queue is provided as an intermediate storage device for allowing data to be transferred between a plurality of interface units, which the Examiner has compared to the links of the claimed invention. A data transfer from the queue is performed when a FIFO in one of the interface has an available space and there is data in the queue to be sent to that interface.

However, the Colmant patent does not teach or suggest the features added by amendment to claim 1. That is, Colmant does not teach or suggest that a plurality of banks in a queue are assigned to at least one of the links, or that a reallocation an assignment of storage banks to links is performed based on a change in load of one or more of the links. Colmant also does not teach or suggest that no banks are assigned to a link if the link is determined not to be in use, so as to ensure that the storage banks in the queue are assigned to links that are in use.

The Sakai publication also fails to teach or suggest these features, i.e., Sakai was cited for disclosing rearranging data in a DPRAM on a bit-by-bit basis. But, Sakai does not teach or suggest the features added by amendment to claim 1. Based on these differences, it is submitted that claim 1 is allowable over a Colmant-Sakai combination.

Claims 6 and 7 have been amended to recite features similar to those which patentably distinguish claim 1 from the cited references. Applicants therefore submit that claims 6, 7, and their dependent claims are also allowable.

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In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Withdrawal of the rejections in the Office Action and furtherance of the application to allowance is respectfully requested.

To the extent necessary, a petition for an extension of time under 37 CFR § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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